Composites Science and Technology **31** (1988) 320–321

SUBJECT INDEX TO VOLUME 31

APC-2, 2
Acoustic emission, 1, 3
Asbestos/nylon/epoxy composites, 261

Buckling, 150

Carbon fibre/PEEK, 1
Carbon fibre/epoxy, 55
Carbon/aluminium composites, 111
Coated fibres, 273
Contact area (impact), 61
Corrosion (carbon/aluminium), 111
Crack
  multiplication, 171
  rail shear, 143
  resistance curve, 28
Cracked laminates (thermal expansion), 247

Debonding, 15
Delamination, 4, 5
Delamination (fracture toughness), 55
Dynamic delamination, 55

Extrusion (reinforced thermoplastics), 295

Failure mechanisms (resins), 179
Failure prediction (toughened resins), 225
Fatigue (size effects), 87
Fatigue of GRP, 87
Fibre
  attrition, 295
  pre-treatment (asbestos fibres), 261
  pull-out, 18, 23
First ply cracking, 170
Fracture
  (toughened resins), 228
  criteria, 237
  toughness, 25, 55
Friction (interfacial), 15

G_c (delamination), 67
Glass-filled polypropylene, 295

Hygrothermal loading, 273

Impact, 1, 55
In-plane shear modulus, 35
Interface, 15
Interlaminar shear, 143
Interphase, 35, 40, 265, 275

Life prediction (fatigue), 92

Mixed mode cracking, 97
Mode III shear, 143
Modification of resins, 182
Multi-directional fibre composites, 273

Composites Science and Technology (**31**) (1988)—© 1988 Elsevier Applied Science Publishers Ltd. England. Printed in Great Britain

Composites Science and Technology **31** (1988) 320–321

SUBJECT INDEX TO VOLUME 31

APC-2, 2
Acoustic emission, 1, 3
Asbestos/nylon/epoxy composites, 261

Buckling, 150

Carbon fibre/PEEK, 1
Carbon fibre/epoxy, 55
Carbon/aluminium composites, 111
Coated fibres, 273
Contact area (impact), 61
Corrosion (carbon/aluminium), 111
Crack
  multiplication, 171
  rail shear, 143
  resistance curve, 28
Cracked laminates (thermal expansion), 247

Debonding, 15
Delamination, 4, 5
Delamination (fracture toughness), 55
Dynamic delamination, 55

Extrusion (reinforced thermoplastics), 295

Failure mechanisms (resins), 179
Failure prediction (toughened resins), 225
Fatigue (size effects), 87
Fatigue of GRP, 87
Fibre
  attrition, 295
  pre-treatment (asbestos fibres), 261
  pull-out, 18, 23
First ply cracking, 170
Fracture
  (toughened resins), 228
  criteria, 237
  toughness, 25, 55
Friction (interfacial), 15

G_c (delamination), 67
Glass-filled polypropylene, 295

Hygrothermal loading, 273

Impact, 1, 55
In-plane shear modulus, 35
Interface, 15
Interlaminar shear, 143
Interphase, 35, 40, 265, 275

Life prediction (fatigue), 92

Mixed mode cracking, 97
Mode III shear, 143
Modification of resins, 182
Multi-directional fibre composites, 273

Composites Science and Technology (**31**) (1988)—© 1988 Elsevier Applied Science Publishers Ltd. England. Printed in Great Britain

Na-K process (C/Al), 112
Nicalon composites, 286
Norris criterion, 101
Notch sensitivity, 121
Notch tip stress fields, 103

PEEK, 1
Particle-filled epoxies, 188

R curve, 27
Random composites, 97
Rubber toughening, 184, 205

Short-beam shear, 12
Short-fibre composites, 25, 97
Size effects (statistics), 87
Specimen size effects, 87
Stability of cracking (resins), 192
Strain energy density criterion, 99
Strength of composites, 121
Strength/toughness correlation, 121
Stress ratio criterion, 98

Thermal expansion (cracked laminates), 247
Thermal properties (asbestos composites), 261
Thermoelastic properties, 273
Time–temperature superposition of G_c, 198
Toughened epoxy resins, 179
Toughening mechanisms (resins), 205
Toughness, 121
Transverse impact, 58
Transverse ply cracking, 165
Tsai–Hill criterion, 101

Weibull statistics (fatigue), 87
Work of fracture, 25

Yield criteria (toughened resins), 235

Composites Science and Technology **31** (1988) 322–324

CUMULATIVE AUTHOR INDEX TO VOLUMES 22–31

Abbot, G. M. (**24**), 147; (**24**), 299
Aboudi, J. (**28**), 103
Adkins, D. W. (**22**), 209
Agarwal, B. D. (**25**), 311
Altus, E. (**26**), 59
Apicella, A. (**24**), 101
Aronsson, C. G. (**24**), 179
Asaka, T. (**24**), 215
Ashbee, K. G. H. (**23**), 135
Ashby, M. F. (**25**), 193

Bader, M. G. (**23**), 287
Bailey, J. E. (**25**), 119
Banerjee, S. (**28**), 129
Barnes, J. A. (**28**), 251
Baron, C. (**29**), 257
Bascom, W. D. (**24**), 253
Bauthel, R. (**23**), 21
Beardmore, P. (**24**), 275; (**26**), 251
Beamount, P. W. R. (**22**), 23; (**24**), 47; (**25**), 193; (**25**), 283
Becht, G. (**31**), 143
Berger, M. A. (**23**), 81
Bert, C. W. (**26**), 119
Biddle, R. A. (**29**), 239
Bishop, S. M. (**23**), 221
Bledski, A. (**23**), 263
Blikstad, M. (**24**), 33
Boll, D. J. (**24**), 253
Bose, N. R. (**29**), 79
Brosey, W. D. (**24**), 161
Bunsell, A. R. (**27**), 157; (**30**), 85

Cantwell, W. J. (**25**), 133
Cappelman, G. R. (**23**), 287
Carlsson, L. A. (**26**), 307; (**27**), 177; (**28**), 1
Castiglione-Morelli, M. A. (**24**), 101
Chang, I. Y. (**24**), 61
Chatterjee, S. N. (**25**), 49
Chen, C. Z. (**30**), 119
Chen, E. J. H. (**29**), 161
Cheung, M. F. (**22**), 197
Chua, P. S. (**22**), 33; (**22**), 185; (**22**), 245; (**23**), 107
Clyne, T. W. (**23**), 287
Conti, P. (**25**), 83
Cooke, R. G. (**31**), 121
Corey, R. (**30**), 35
Crasto, A. S. (**30**), 35
Croman, R. B. (**31**), 165
Crowther, M. F. (**31**), 87
Curtis, P. T. (**23**), 221; (**25**), 133; (**27**), 63

Da, Y. X. (**30**), 119
Dai, S. R. (**31**), 15
Das, C. K. (**28**), 129
DeIasi, R. J. (**24**), 123
Dharani, L. R. (**30**), 221
Dick, W. A. (**25**), 49
Dickinson, J. T. (**30**), 35
Donaldson, S. L. (**28**), 33
Dorey, G. (**23**), 221
Dorey, S .E. (**31**), 121

Composites Science and Technology (**31**) (1988)—© 1988 Elsevier Applied Science Publishers Ltd, England. Printed in Great Britain

Ebert, L. J. (**28**), 137
Eckstein, Y. (**30**), 35
Ehrenstein, G. W. (**23**), 263
Engblom, J. J. (**28**), 87
Evans, K. E. (**25**), 149; (**30**), 251

Favry, Y. (**30**), 85
Fels, A. (**23**), 79
Fischer, A. (**25**), 69; (**28**), 291
Fowser, S. W. (**26**), 31
Freischmidt, G. (**24**), 299
Friedrich, K. (**22**), 43; (**23**), 79; (**30**), 19; (**30**), 203
Fukuda, H. (**23**), 153

Garg, A. C. (**31**), 179; (**31**), 225
Gibson, A. G. (**25**), 149
Gillespie, J. W. (**27**), 177; (**28**), 1; (**31**), 143
Giri, J. (**22**), 259
Girot, F. A. (**30**), 155
Goering, J. (**29**), 103
Grady, J. E. (**31**), 55
Gu, J. (**31**), 111
Guigon, N. (**25**), 231; (**27**), 1
Gunduz, G. (**30**), 127
Gupta, B. S. (**28**), 45
Gupta, V. B. (**28**), 45; (**31**), 295
Gustafson, C. G. (**29**), 273

Hahn, H. T. (**27**), 25; (**31**), 165
Han, G. H. (**31**), 111
Han, Y. M. (**31**), 165
Harig, H. (**29**), 257
Harris, B. (**30**), 263; (**31**), 121
Harwood, J. J. (**24**), 275
Hashin, Z., (**23**), 1; (**29**), 103; (**31**), 247
Hayashi, R. (**25**), 3; (**29**), 273
Henrat, P. (**30**), 263
Hogg, P. J. (**29**), 89
Hojo, M. (**29**), 273
Hornbogen, E. (**23**), 79
Hubert, P. A. (**23**), 287
Hull, D. (**28**), 193; (**28**), 211; (**28**), 251
Humphreys, E. A. (**29**), 103

Ikegami, K. (**27**), 43
Ishai, O. (**26**), 59

Jamison, R. D. (**24**), 83
Janas, V. F. (**29**), 293; (**30**), 99
Jarvela, P. (**23**), 113
Jiang, H. (**29**), 33
Jiu, X. M. (**25**), 169
Johannesson, T. (**24**), 33
Johnson, C. F. (**26**), 251
Johnson, N. L. (**29**), 239
Jones, F. R. (**25**), 119

Kabe, K. (**24**), 215
Kan, H. P. (**23**), 53
Karnerfors, H. (**27**), 291
Kelly, A. (**23**), 171
Khanna, S. K. (**25**), 311
Kiiko, V. M. (**26**), 85
Kikushima, K. (**27**), 43
Kishore, N. N. (**24**), 1
Krumphold, R. (**30**), 5
Kumar, A. N. (**29**), 17
Kumar, P. (**25**), 311
Kumosa, M. (**28**), 251
Kutter, S. (**30**), 19; (**30**), 203

Ladizesky, N. H. (**26**), 129; (**26**), 169; (**26**), 199
Lagace, P. A. (**26**), 95
Lam, P. W. K. (**23**), 247
Lauke, B. (**23**), 21; (**26**), 1; (**26**), 37; (**31**), 25
Leach, D. C. (**23**), 131
Leck, D. C. (**28**), 279
Li, C. A. (**24**), 1
Lilholt, H. (**22**), 277
Lim, J. T. (**23**), 247
Lindefors, S. (**27**), 291
Luo, J. (**23**), 121

Macke, T. (**26**), 185
Mai, Y. W. (**31**), 179; (**31**), 225
Malzahn, J. C. (**25**), 187; (**27**), 253
Marom, G. (**25**), 69; (**28**), 291; (**29**), 161
Martin, E. (**26**), 185
McCullough, R. L. (**22**), 3; (**23**), 81; (**29**), 293; (**30**), 99; (**30**), 137; (**30**), 185
McLean, M. (**23**), 37
Mileiko, S. T. (**26**), 85
Milios, J. (**25**), 301
Miller, B. (**28**), 17
Mindroiu, V. E. (**22**), 197
Mittal, R. K. (**28**), 45; (**31**), 295
Moore, D. R. (**23**), 131; (**31**), 1
Morton, J. (**25**), 133
Motiee, B. (**24**), 253
Motoki, K. (**24**), 243

Mottram, J. T. (**29**), 189; (**29**), 211
Mulheron, M. (**25**), 119
Muri, P. (**28**), 17

Nanda, A. (**29**), 17
Naslain, R. (**26**), 185; (**30**), 155
Newaz, G. M. (**24**), 199
Nicolais, L. (**24**), 101
Nilsson, S. (**26**), 307
Nixon, J. A. (**31**), 1
Nobile, M. R. (**24**), 101

Oberlin, A. (**25**), 231; (**27**), 1
Ogale, A. A. (**30**), 137; (**30**), 185
Ogasa, T. (**25**), 3
Ogin, S. L. (**22**), 23; (**24**), 47
Okura, A. (**24**), 243
Ozden, O. O. (**28**), 87

Pagano, N. J. (**22**), 295; (**25**), 251; (**31**), 273
Pandey, R. K. (**29**), 17
Papanicolaou, G. C. (**31**), 261
Papaspyrides, C. D. (**31**), 261
Park, S. K. (**25**), 219
Parry, T. V. (**26**), 17; (**28**), 279
Pascoe, K. J. (**29**), 45
Phani, K. K. (**29**), 79; (**30**), 59
Phillips, M. G. (**31**), 1
Piggott, M. R. (**22**), 33; (**22**), 185; (**22**), 245; (**23**), 107; (**23**), 247; (**30**), 295; (**31**), 15
Pipes, R. B. (**22**), 209; (**25**), 49; (**26**), 31; (**27**), 177; (**29**), 1
Pohjonen, T. (**23**), 113
Pompe, W. (**26**), 37; (**31**), 25
Poursartip, A. (**25**), 193; (**25**), 283
Prediger, R. S. (**31**), 1
Price, J. N. (**28**), 193; (**28**), 211

Quenisset, J. M. (**26**), 185; (**30**), 155

Ramsteiner, F. (**24**), 231
Ratwani, M. M. (**23**), 53
Rebenfeld, L. (**28**), 17
Ren, J. G. (**26**), 225; (**27**), 249; (**28**), 231
Robertson, R. E. (**22**), 197
Rohwer, K. (**25**), 169
Rosensaft, N. (**25**), 69
Rotem, A. (**25**), 271

Sako, K. (**24**), 215
Sargent, J. R. (**23**), 135
Schadlich, S. (**30**), 5
Schulte, K. (**29**), 257; (**30**), 19; (**30**), 203
Schulte, R. L. (**24**), 123
Schultrich, B. (**23**), 21; (**26**), 1
Schultz, J. M. (**25**), 187; (**27**), 253
Sharma, P. K. (**28**), 45; (**31**), 295
Shaw, D. (**22**), 259
Sheinman, I. (**22**), 259
Shih, G. (**28**), 137
Shiratori, E. (**27**), 43
Sideridis, E. (**27**), 305; (**31**), 35
Simitses, G. J. (**22**), 259
Simon, G. (**27**), 157
Sinderlar, P. (**26**), 307
Sitepu, M. (**26**), 169
Smiley, A. J. (**28**), 1; (**29**), 1
Smith, P. A. (**22**), 23; (**24**), 47; (**29**), 45
Sohi, M. M. (**27**), 25
Spathis, G. (**25**), 301
Spaude, R. (**23**), 263
Spencer, A. M. (**27**), 93; (**28**), 57; (**28**), 173
Starkey, M. S. (**31**), 87
Stinchcombe, W. W. (**25**), 103
Subramanian, R. V. (**30**), 35
Sui, Q. W. (**31**), 111
Sullivan, J. L. (**27**), 133
Sun, C. T. (**23**) 121; (**31**), 55
Sun, M. J. (**30**), 119

Tan, S. C. (**29**), 133
Tanaka, K. (**29**), 273
Tandon, G. P. (**27**), 111; (**31**), 273
Taylor, R. (**29**), 189; (**29**), 211
Theysohn, R. (**24**), 231
Thornton, P. H. (**24**), 275; (**27**), 199
Tormala, P. (**23**), 113
Tsai, L. W. (**31**), 97
Tsujimoto, Y. (**26**), 283

Ullmann, W. (**23**), 97

Vallianos, C. (**30**), 239
Van Oene, H. (**27**), 133
Vautrin, A. (**30**), 263

Waltersson, K. (**22**), 241; (**23**), 303
Wang, A. S. D. (**24**), 1

Wang, D. X. (**30**), 119
Ward, I. M. (**26**), 129; (**26**), 169; (**26**), 199
Weatherold, R. C. (**25**), 219
Weiss, H. J. (**30**), 5
Wendorff, J. H. (**23**), 97
Weng, G. J. (**27**), 111
Whitcomb, J. D. (**25**), 19
Whiteside, J. B. (**24**), 123
Whitford, L. E. (**22**), 295
Whitney, J. M. (**22**), 167; (**23**), 201
Wilkinson, E. (**26**), 17
Wilson, D. W. (**26**), 31; (**26**), 283
Wilson, J. M. (**28**), 279
Woo, M. S. (**23**), 247
Wronski, A. S. (**26**), 17
Wu, C. (**29**), 33

Yalcin, N. (**30**), 127
Yang, P. (**29**), 33
Yao, C. K. (**31**), 111
Yoshida, H. (**25**), 3
Yurgartis, S. W. (**30**), 279

Zadorecki, P. (**27**), 291
Zhang, A. (**29**), 33
Zhang, S. Y. (**31**), 97
Zhang, W. C. (**30**), 251

Composites Science and Technology **31** (1988) 326–327

CONTENTS OF VOLUME 31

Number 1

A Study of the Development of Impact Damage in Cross-ply Carbon Fibre/PEEK Laminates Using Acoustic Emission 1
J. A. NIXON, M. G. PHILLIPS, D. R. MOORE and R. S. PREDIGER (UK)

Debonding and Friction at Fibre–Polymer Interfaces. II: Macroscopic Model Experiments 15
M. R. PIGGOTT and S. R. DAI (Canada)

Relation Between Work of Fracture and Fracture Toughness of Short-Fibre Reinforced Polymers 25
B. LAUKE and W. POMPE (German Democratic Republic)

The In-Plane Shear Modulus of Fibre Reinforced Composites as Defined by the Concept of Interphase 35
E. SIDERIDIS (Greece)

Dynamic Delamination Fracture Toughness of a Graphite/Epoxy Laminate Under Impact 55
C. T. SUN and J. E. GRADY (USA)

Book Reviews 73

Conference Diary 77

Number 2

Guest Editorial 81
I. CRIVELLI VISCONTI (Italy)

Use of Weibull Statistics to Quantify Specimen Size Effects in Fatigue of GRP . 87
M. F. CROWTHER and M. S. STARKEY (UK)

Prediction of Mixed-mode Cracking Direction in Random, Short-fibre Composite Materials 97
L. W. TSAI and S. Y ZHANG (People's Republic of China)

Corrosion Behaviour of a Carbon–Aluminium Composite 111
J. GU, G. H. HAN, Q. W. SUI and C. K. YAO (People's Republic of China)

Composites Science and Technology (**31**) (1988)—© 1988 Elsevier Applied Science Publishers Ltd, England. Printed in Great Britain

Strength and Toughness of Fibre Composites 121
B. HARRIS, S. E. DOREY and R. G. COOKE (UK)

Design and Analysis of the Crack Rail Shear Specimen for Mode III Interlaminar Fracture 143
GARY BECHT and JOHN W. GILLESPIE, JR (USA)

Book Reviews 159

Conference Diary 161

Number 3

A Simplified Analysis of Transverse Ply Cracking in Cross-Ply Laminates . . 165
Y. M. HAN, H. T. HAHN and R. B. CROMAN (USA)

Failure Mechanisms in Toughened Epoxy Resins—A Review 179
AMAR C. GARG (India) and YIU-WING MAI (Australia)

Failure Prediction in Toughened Epoxy Resins 225
AMAR C. GARG (India) and YIU-WING MAI (Australia)

Conference Diary 243

Number 4

Thermal Expansion Coefficients of Cracked Laminates 247
Z. HASHIN (Israel)

Effect of Fibre Pre-treatment on Thermal Characteristics of Asbestos–Nylon–Epoxy Composites 261
G. C. PAPANICOLAOU and C. D. PAPASPYRIDES (Greece)

Elastic Response of Multi-directional Coated-fiber Composites 273
N. J. PAGANO and G. P. TANDON (USA)

Theoretical and Experimental Study of Fibre Attrition during Extrusion of Glass-fibre-reinforced Polypropylene 295
R. K. MITTAL, V. B. GUPTA and P. K. SHARMA (India)

Announcement 315

Conference Diary 316

Subject Index 320

Cumulative Author Index to Volumes 22–31 322

Contents of Composite Structures

As a service to readers, the contents list of the current issue of this sister journal is reproduced here.

Volume 9, Number 2

The Effects of Induced Axial Strains on the Damping of Clamped-clamped Unidirectional CFRP and Resin Rods in Torsion 89
T. A. WILLWAY and R. G. WHITE (UK)

The Specially Orthotropic GRP Multi-Layered Cylindrical Shell—The Fluid Loading of the Partially Filled Horizontal Vessel or Pipe 101
A. S. TOOTH, W. M. BANKS (UK) and D. H. A. RAHMAN (Malaysia)

Buckling of Thick Orthotropic Spherical Shells 113
C. C. CHAO, T. P. TUNG and Y. C. CHERN (Taiwan)

Buckling, Post-Buckling and Failure of Elliptical Delaminations in Laminates under Compression 139
CHRISTOS KASSAPOGLOU (USA)

Optimal Fibre Orientation for Simply-Supported, Angle-Ply Plates Under Biaxial Compression 161
ALEKSANDER MUC (UK)

Composites Science and Technology (31) (1988)—© 1988 Elsevier Applied Science Publishers Ltd, England. Printed in Great Britain